

WHAT IS CLAIMED IS:

1. A toy assembly, comprising:

a plurality of arcuate sections forming a generally spherical body, said arcuate sections being symmetrically disposed around a central axis;

a plurality of leaf springs disposed within said generally spherical body, wherein a leaf spring is disposed along each of said arcuate sections;

a connector mechanism having two components that temporarily connect when brought into abutment, each of said components being disposed along said central axis on opposite sides of said spherical body;

wherein said arcuate sections are flexible and enable said spherical body to be compressed into a non-spherical shape so that said components of said connector mechanism abut and temporarily connect, said leaf springs providing a spring bias that resists compression and causes said arcuate sections to return to a generally spherical shape when said components of said connector mechanism disconnect.

2. The assembly according to Claim 1, wherein said spherical body is bisected by an imaginary equatorial

plane that is perpendicular to said central axis, and wherein each of said arcuate sections includes an upper panel and a lower panel that are joined with a hinged connection along said imaginary equatorial plane.

3. The assembly according to Claim 2, wherein each said leaf spring extends between an upper panel and a lower panel across said hinged connection.

4. The assembly according to Claim 3, wherein a bending block is disposed adjacent each of said leaf springs in said equatorial plane, wherein said bending block enables said leaf spring to fold without creasing when said spherical body is compressed.

5. The assembly according to Claim 1, further including two end hubs disposed on opposite ends of said spherical body along said central axis, wherein said end hubs interconnect said arcuate sections to form said spherical body.

6. The assembly according to Claim 5, wherein said end hubs support said components of said connector mechanism within said spherical body.

7. The assembly according to Claim 1, wherein said components of said connector mechanism include a suction cup and a suction cup plate.

8. A method of forming a collapsible ball, comprising the steps of:

providing a plurality of arcuate sections;

joining said arcuate sections to form a body with a spherical shape that has a central axis and a equatorial plane perpendicular to said central axis;

providing a leaf spring adjacent each of said arcuate sections within said body that bias said arcuate sections into a configuration that forms said spherical shape;

providing a connector mechanism within said spherical body that causes opposing internal areas of said body to temporarily interconnect when said body is compressed and deformed out of said spherical shape and said opposing internal areas are brought into abutment.

9. The method according to Claim 8, wherein said step of providing a plurality of arcuate sections includes providing a plurality of arcuate sections that have a hinge joint at a point where said equatorial plane bisects each of said arcuate sections.

10. The method according to Claim 8, further including the step of providing a rolling block for each said leaf spring.

11. The method according to Claim 10, wherein each said leaf spring bends around said rolling block when said body is compressed and deformed out of said spherical shape.

12. The method according to Claim 8, further including the step of providing end hubs that support said arcuate sections to form said spherical body.

13. The method according to Claim 8, wherein said end hubs support said connector mechanism within said spherical body.

14. The method according to Claim 13, wherein said components of said connector mechanism include a suction cup and a suction cup plate.

15. A collapsible ball assembly, comprising:

a body having a center axis that can be selectively configured between a spherical shape and a disc shape, said body being comprised of a plurality of arcuate sections symmetrically disposed around said center axis;

a plurality of leaf springs, wherein one leaf spring is attached to each of said arcuate sections and biases said arcuate sections into said spherical shape;

a connection mechanism within said body that retains said body in said disc shape against the bias of said plurality of leaf springs a period of time after said body is compressed from said spherical shape into said disc shape.

16. The collapsible ball assembly according to Claim 15, wherein said body has a equatorial plane and each

of said plurality of arcuate sections has a hinge joint where intersected by said equatorial plane.

17. The collapsible ball assembly according to Claim 15, further including end hubs that engage and retain said plurality of arcuate sections to form said body.

18. The collapsible ball assembly according to Claim 15, wherein a bending block is disposed adjacent each of said leaf springs, wherein said bending block enables said leaf spring to fold without creasing when said body is compressed.